

PCT/0/531783

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

RECEIVED

2003-12-16

U-A PD

BEST AVAILABLE COPY

Applicant's or agent's file reference PU02103-PCT	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/SE 03/01434	International filing date (day/month/year) 12 Sept 2003	(Earliest) Priority Date (day/month/year) 31 October 2002
Applicant Amersham Biosciences AB et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

Use of urea variants as affinity ligands

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE03/01434

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: **20**
because they relate to subject matter not required to be searched by this Authority, namely:
see next sheet*
2. ☒ Claims Nos.: **13 and 14**
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see next sheet**
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

*

Claim 20 relates to a method for isolating human IgG of K-type from other components in a liquid. In view of the large number of urea compounds found and also the lack of clarity of claim 20 regarding the steps of the method, which render it difficult, if not impossible, to determine the matter for which protection is sought, the present application fails to comply with the clarity and conciseness requirements of Article 6 PCT (see also Rule 6.1(a) PCT) to such an extent that a meaningful search on the basis of the claim is impossible. Consequently, no search has been carried out for the claimed method in claim 20.

**

Present claims 13-14 relate to a compound defined by:

P1: Binding constant ($10e-3M$) or,

P2: Structure coordinates of a binding pocket.

The use of these parameters in the present context is considered to lead to a lack of clarity within the meaning of Article 6 PCT. It is impossible to compare the parameters the applicant has chosen to employ with what is set out in the prior art. The lack of clarity is such as to render a meaningful complete search impossible. Consequently, the search has been restricted to: The parts relating to the compounds given in Formula I relating urea-like compounds.

1
INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 03/01434

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07C 275/00, C07D 213/81, A61P 37/00, C07D 233/34, A61K 31/17, C12Q 1/58, G01N 33/62 // C08G 71/02, A01N 47/28, C07K 16/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07C, C07D, A61K, C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, STN, CAPLUS, EMBASE, PAJ, EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	J. Med. Chem., Volume 46, 2003, Nathan R. McElroy et al: 2QSAR and Classification of Murine and Human Soluble Epoxide Hydrolase Inhibition by Urea-Like Compounds", page 1066 - page 1080, table I, II --	1-14
X	J. Microcolumn Separations, Volume 12, no. 5, 2000, Eric Schoenetzter et al: "Rapid Sample Handling in Microcolumn-Liquid Chromatography Using Selective On-Line Immunoaffinity Extraction", page 316 - page 322, figure 1, table 1 --	1-14,16-19, 21

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

9 December 2003

Date of mailing of the international search report

15 -12- 2003

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Fernando Farieta/EÖ
Telephone No. +46 8 782 25 00

2
INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 03/01434

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Journal of Chromatography A, Volume 732, 1996, James F. Lawrence et al: "Use of immunoaffinity chromatography as a simplified cleanup technique for the liquid chromatographic determination of phenylurea herbicides in plant material", page 277 - page 281, figure 1 --	1-14,16-19, 21
X	J. Agric. Food Chem., Volume 42, 1994, Peter Schneider et al: "A Highly Sensitive and Rapid ELISA for the Arylurea Herbicides Diuron, Monuron, and Linuron", page 413 - page 422, figure 1, compounds 6-10 --	1-14
A	--	15-19,21
X	WO 9727752 A1 (MERCK & CO., INC.), 7 August 1997 (07.08.97), formula I --	1-14
X	STN International, File CAPLUS, CAPLUS accession no. 1978:165488, Kyowa Hakko Kogyo Co., Ltd. et al: "Prevention of crop plant damage caused by N-substituted phenylcarbamoylamino acid herbicides"; & JP,A2,52154523, 19771222, formula I --	1-14
X	EP 0743067 A2 (TORAY INDUSTRIES, INC.), 20 November 1996 (20.11.96), claims 1-36, formula I --	1-19,21
Y	WO 02076930 A2 (TELIK, INC.), 3 October 2002 (03.10.02), claim 22 --	1-19,21
Y	WO 02083628 A1 (BOEHRINGER INGELHEIM PHARMACEUTICALS, INC.), 24 October 2002 (24.10.02), formula I --	1-19,21

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p><i>Analytica Chimica Acta</i>, Volume 399, 1999, Petra M. Krämer et al: "Flow injection immunoaffinity analysis (FIIAA) - A screening technology for atrazine and diuron in water samples", page 89 - page 97, Diuron</p> <p>---</p>	1-19,21
A	<p><i>Journal of Immunological Methods</i>, Volume 196, 1996, G.A. Bonwick et al: "Production of murine monoclonal antibodies against sulcofuron and flucofuron by in vitro immunisation", page 163 - page 173, figures 1, 5</p> <p>---</p>	1-19,21
A	<p>US 2002193633 A1 (ZIXIA FENG ET AL), 19 December 2002 (19.12.02), scheme 1, claims 1-19</p> <p>---</p>	1-19,21
A	<p>EP 0327365 A2 (HYBRITECH INCORPORATED), 9 August 1989 (09.08.89), claims 1-32</p> <p>-----</p>	1-19,21

INTERNATIONAL SEARCH REPORT

Information on patent family members

31/10/03

International application No.

PCT/SE 03/01434

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO	9727752	A1	07/08/97	AU	712504 B	11/11/99
				AU	1851697 A	22/08/97
				CA	2243507 A	07/08/97
				EP	0880320 A	02/12/98
				GB	9605699 D	00/00/00
				US	6028201 A	22/02/00
EP	0743067	A2	20/11/96	SE	0743067 T3	
				AU	699336 B	03/12/98
				AU	5226696 A	28/11/96
				CA	2176671 A	17/11/96
				CN	1157817 A	27/08/97
				DE	69624975 D,T	17/07/03
				ES	2187618 T	16/06/03
				JP	9235263 A	09/09/97
				US	5928633 A	27/07/99
				US	6190688 B	20/02/01
WO	02076930	A2	03/10/02	CA	2434020 A	03/10/02
				US	6525091 B	25/02/03
				US	2002188027 A	12/12/02
WO	02083628	A1	24/10/02	US	2003083333 A	01/05/03
US	2002193633	A1	19/12/02	US	6500864 B	31/12/02
				US	6492552 B	10/12/02
				US	6506802 B	14/01/03
				US	2002058709 A	16/05/02
				US	2002193634 A	19/12/02
				AU	5567501 A	03/12/01
				CA	2407964 A	29/11/01
				CN	1429209 T	09/07/03
				EP	1282599 A	12/02/03
				WO	0190060 A	29/11/01
EP	0327365	A2	09/08/89	SE	0327365 T3	
				AT	107276 T	15/07/94
				AU	621585 B	19/03/92
				AU	2956389 A	03/08/89
				DE	68916052 D,T	10/11/94
				DK	47389 A	04/08/89
				ES	2058492 T	01/11/94
				JP	2001434 A	05/01/90

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.